

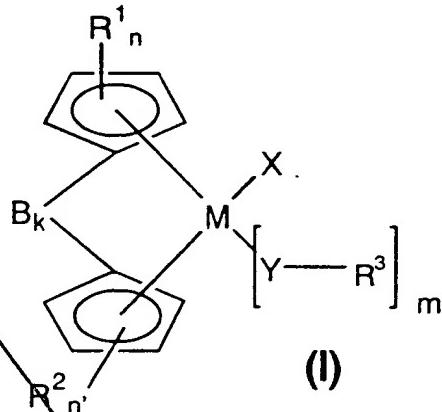
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CLEAN VERSION OF AMENDED CLAIMS

Please cancel claims 1-8. Please enter new claims 9-15

Claims 9-15 should read as follows:

9.(newly added) A compound of the formula (I),



where

M is a metal of transition group III, IV, V or VI of the Periodic Table of the Elements,

R<sup>1</sup> are identical or different and are each a radical Si(R<sup>12</sup>)<sub>3</sub>, where R<sup>12</sup> are identical or different and are each a hydrogen atom or a C<sub>1</sub>-C<sub>40</sub>-group or R<sup>1</sup> is a C<sub>1</sub>-C<sub>30</sub>-group, or two or more radicals R<sup>1</sup> may be connected to one another in such a way that the radicals R<sup>1</sup> and the atoms of the cyclopentadienyl ring which connect them form a C<sub>4</sub>-C<sub>24</sub>-ring system which may in turn be substituted,

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cont'd*

$R^2$  are identical or different and are each a radical  $\text{Si}(R^{12})_3$ , where  $R^{12}$  are identical or different and are each a hydrogen atom or a  $C_1\text{-}C_{40}$ -group, or  $R^2$  is a  $C_1\text{-}C_{30}$ -group, or two or more radicals  $R^2$  may be connected to one another in such a way that the radicals  $R^2$  and the atoms of the cyclopentadienyl ring which connect them form a  $C_4\text{-}C_{24}$ -ring system which may in turn be substituted,

$R^3$  are identical or different and are each a  $C_2\text{-}C_{25}$ -alkenyl,  $C_3\text{-}C_{15}$ -alkylalkenyl,  $C_5\text{-}C_{24}$ -heteroaryl,  $C_7\text{-}C_{30}$ -arylalkyl,  $C_7\text{-}C_{30}$ -alkylaryl, fluorinated  $C_1\text{-}C_{25}$ -alkyl, fluorinated  $C_6\text{-}C_{24}$ -aryl, fluorinated  $C_7\text{-}C_{30}$ -arylalkyl or fluorinated  $C_7\text{-}C_{30}$ -alkylaryl,

$X$  is a halogen atom,

$Y$  is an element of main group VI of the Periodic Table of the Elements or a fragment  $\text{CH}_2$ ,  $\text{CR}^3_2$ ,  $\text{NR}^3$ ,  $\text{PR}^3$  or  $\text{P}(=\text{O})\text{R}^3$ ,

$n$  is from 0 to 4,

$n'$  is from 0 to 4,

$m$  is from 1 to 3,

$k$  is 1,

$B$  is a bridging structural element between the two cyclopentadienyl rings and one or both cyclopentadienyl rings are substituted in such a way that they form an indenyl ring.

10.(newly added) A compound as claimed in claim 9, wherein

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cont'd* M is Ti, Zr or Hf,

R<sup>1</sup> are identical or different and are each a radical Si( R<sup>12</sup>)<sub>3</sub>, where R<sup>12</sup> are identical or different and are each a hydrogen atom a C<sub>1</sub>-C<sub>20</sub>-alkyl,

C<sub>1</sub>-C<sub>10</sub>-fluoroalkyl, C<sub>1</sub>-C<sub>10</sub>-alkoxy, C<sub>6</sub>-C<sub>10</sub>-aryl, C<sub>6</sub>-C<sub>10</sub>-fluoroaryl,

C<sub>6</sub>-C<sub>10</sub>-aryloxy, C<sub>2</sub>-C<sub>10</sub>-alkenyl,

or R<sup>1</sup> is C<sub>1</sub>-C<sub>25</sub>-alkyl, C<sub>2</sub>-C<sub>25</sub>-alkenyl, C<sub>3</sub>-C<sub>15</sub>-alkylalkenyl, C<sub>6</sub>-C<sub>24</sub>-aryl,

C<sub>5</sub>-C<sub>24</sub>-heteroaryl, C<sub>7</sub>-C<sub>30</sub>-arylalkyl, C<sub>7</sub>-C<sub>30</sub>-alkylaryl, fluorinated C<sub>1</sub>-C<sub>25</sub>-alkyl,

fluorinated C<sub>6</sub>-C<sub>24</sub>-aryl, fluorinated C<sub>7</sub>-C<sub>30</sub>-arylalkyl, fluorinated C<sub>7</sub>-C<sub>30</sub>-

alkylaryl, or C<sub>1</sub>-C<sub>12</sub>-alkoxy, or two or more radicals R<sup>1</sup> may be connected to

one another in such a way that the radicals R<sup>1</sup> and the atoms of the

cyclopentadienyl ring which connect them form a C<sub>4</sub>-C<sub>24</sub>-ring system which may in turn be substituted,

R<sup>2</sup> are identical or different and are each a radical Si( R<sup>12</sup>)<sub>3</sub>, where R<sup>12</sup> are identical or different and are each a hydrogen atom a C<sub>1</sub>-C<sub>20</sub>-alkyl,

C<sub>1</sub>-C<sub>10</sub>-fluoroalkyl, C<sub>1</sub>-C<sub>10</sub>-alkoxy, C<sub>6</sub>-C<sub>10</sub>-aryl, C<sub>6</sub>-C<sub>10</sub>-fluoroaryl,

C<sub>6</sub>-C<sub>10</sub>-aryloxy, C<sub>2</sub>-C<sub>10</sub>-alkenyl,

or R<sup>2</sup> is C<sub>1</sub>-C<sub>25</sub>-alkyl, C<sub>2</sub>-C<sub>25</sub>-alkenyl, C<sub>3</sub>-C<sub>15</sub>-alkylalkenyl, C<sub>6</sub>-C<sub>24</sub>-aryl,

C<sub>5</sub>-C<sub>24</sub>-heteroaryl, C<sub>7</sub>-C<sub>30</sub>-arylalkyl, C<sub>7</sub>-C<sub>30</sub>-alkylaryl, fluorinated C<sub>1</sub>-C<sub>25</sub>-alkyl,

fluorinated C<sub>6</sub>-C<sub>24</sub>-aryl, fluorinated C<sub>7</sub>-C<sub>30</sub>-arylalkyl, fluorinated C<sub>7</sub>-C<sub>30</sub>-

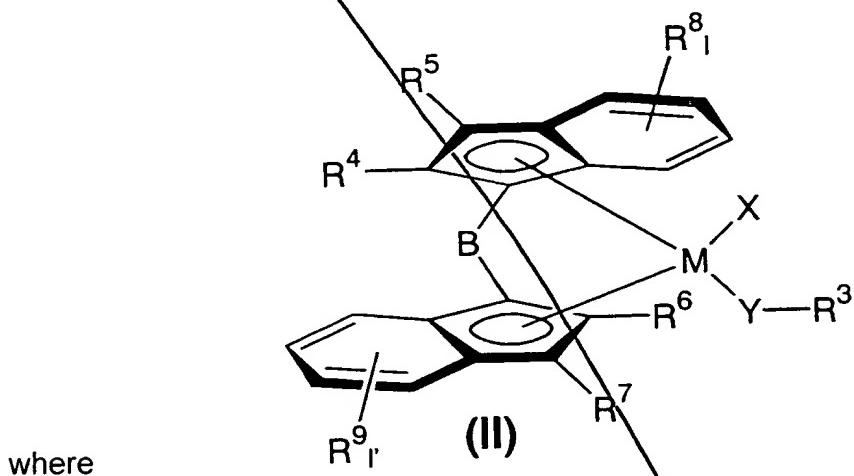
alkylaryl, or C<sub>1</sub>-C<sub>12</sub>-alkoxy, or two or more radicals R<sup>2</sup> may be connected to

one another in such a way that the radicals R<sup>2</sup> and the atoms of the

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cont'd*

cyclopentadienyl ring which connect them form a C<sub>4</sub>-C<sub>24</sub>-ring system which may in turn be substituted,  
 is chlorine  
 Y is oxygen, sulfur or N R<sup>3</sup>,  
 m is 1 and  
 one or both cyclopentadienyl rings are substituted in such a way that they form an indenyl ring which is substituted.

11. A compound of the formula (II)



M is Ti, Zr or Hf,

R<sup>3</sup> is isopropyl, tert-butyl, cyclohexyl or octyl, a C<sub>5</sub>-C<sub>24</sub>-heteroaryl, C<sub>7</sub>-C<sub>30</sub>-arylalkyl, C<sub>7</sub>-C<sub>30</sub>-alkylaryl, fluorinated C<sub>6</sub>-C<sub>24</sub>-aryl, fluorinated C<sub>7</sub>-C<sub>30</sub>-arylalkyl, or fluorinated C<sub>7</sub>-C<sub>30</sub>-alkylaryl

R<sup>4</sup>, R<sup>6</sup> are identical or different and are each a hydrogen atom or a C<sub>1</sub>-C<sub>20</sub>-group,

R<sup>5</sup>, R<sup>7</sup> are identical or different and are each a hydrogen atom or a C<sub>1</sub>-C<sub>20</sub>-group,

R<sup>8</sup>, R<sup>9</sup> are identical or different and are each a hydrogen atom, a halogen atom

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cont'd*

or a C<sub>1</sub>-C<sub>20</sub>-group, and two radicals R<sup>8</sup> or R<sup>9</sup> may form a monocyclic or polycyclic ring system which may in turn be substituted,

- X is a halogen atom,
- Y is an element of main group VI of the Periodic Table of the Elements or a fragment CH, C R<sup>3</sup>, NR<sup>3</sup>, PR<sup>3</sup> or P(=O)R<sup>3</sup>,
- I, I' are identical or different and are each an integer from zero to 4,
- B is a bridging structural element between the two indenyl radicals.

12.(newly added) A compound as claimed in claim 11, wherein, in the formula (II),

- M is zirconium,
- R<sup>4</sup>, R<sup>6</sup> are identical or different and are each a hydrogen atom, a C<sub>1</sub>-C<sub>18</sub>-alkyl, C<sub>2</sub>-C<sub>10</sub>-alkenyl, C<sub>3</sub>-C<sub>15</sub>-alkylalkenyl, C<sub>6</sub>-C<sub>18</sub>-aryl, C<sub>5</sub>-C<sub>18</sub>-heteroaryl, C<sub>7</sub>-C<sub>20</sub>-arylalkyl, C<sub>7</sub>-C<sub>20</sub>-alkylaryl, fluorinated C<sub>1</sub>-C<sub>12</sub>-alkyl, fluorinated C<sub>6</sub>-C<sub>18</sub>-aryl, fluorinated C<sub>7</sub>-C<sub>20</sub>-arylalkyl or fluorinated C<sub>7</sub>-C<sub>20</sub>-alkylaryl,
- R<sup>8</sup>, R<sup>9</sup> are identical or different and are each a hydrogen atom, a halogen atom a linear or branched C<sub>1</sub>-C<sub>18</sub>-alkyl group, C<sub>2</sub>-C<sub>25</sub>-alkenyl, C<sub>3</sub>-C<sub>15</sub>-alkylalkenyl, a C<sub>6</sub>-C<sub>18</sub>-aryl group which may be substituted, C<sub>5</sub>-C<sub>18</sub>-heteroaryl, C<sub>7</sub>-C<sub>20</sub>-arylalkyl, C<sub>7</sub>-C<sub>20</sub>-alkylaryl, fluorinated C<sub>1</sub>-C<sub>12</sub>-alkyl, fluorinated C<sub>6</sub>-C<sub>18</sub>-aryl, fluorinated C<sub>7</sub>-C<sub>20</sub>-arylalkyl or fluorinated C<sub>7</sub>-C<sub>20</sub>-alkylaryl, and two radicals R<sup>8</sup> or R<sup>9</sup> may form a monocyclic or polycyclic ring system which in turn may be substituted,
- X is chlorine,
- Y is oxygen, sulfur or NR<sup>3</sup>,

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I, I' are identical or different and are each 1 or 2,

13.(newly added) A catalyst comprising at least one compound as claimed in claim 9

and a support and, optionally, a cocatalyst.

14.(newly added) A process for preparing a polyolefin which comprises polymerizing an olefinic monomer in the presence of a catalyst as claimed in claim 13.

15(newly added) The use of a catalyst as claimed in claim 13 for olefin polymerization.